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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,732	08/27/2001	Yoshiaki Kotani	010963	2753

23850 7590 12/18/2002

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EXAMINER

CUEVAS, PEDRO J

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 12/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/938,732

Applicant(s)

KOTANI ET AL.

Examiner

Pedro J. Cuevas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 10/21/02 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being unpatentable over U.S. Patent No. 5,734,255 to Thompson et al. in view of U.S. Patent No. 5,063,901 to Kaneyasu et al.

Thompson et al. disclose the construction of a control system and circuits for distributed electrical power generating stations comprising:

a fault detecting means (6) for detecting a fault in the interconnection with the power network; and

a means (58) for:

interconnecting the output of the power generator with the power network, when the oxygen density sensor becomes its activated state;

canceling the interconnection with the power system when the fault detecting means detects a fault, and resuming the interconnection with the power network when the fault is removed; and

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stopping the engine when the interconnection is canceled for a predetermined length of time due to the fault detection.

However, it fails to disclose an oxygen density sensor provided on the engine for controlling the air-fuel ratio based on its output.

Kaneyasu et al. teaches the construction of a diagnosis system and optimum control system for internal combustion engine comprising an oxygen density sensor (5) provided on the engine for the purpose of allowing optimum control of fuel in the air-to-fuel ratio feedback of the engine.

It would have been obvious to one skilled in the art at the time the invention was made to use the oxygen density sensor disclosed by Kaneyasu et al. on the control system and circuits for distributed electrical power generating stations disclosed by Thompson et al. for the purpose of allowing optimum control of fuel in the air-to-fuel ratio feedback of an engine.

4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,734,255 to Thompson et al. in view of U.S. Patent No. 5,063,901 to Kaneyasu et al. as applied to claim 1 above, further in view of U.S. Patent No. 4,873,840 to Gilliusson.

Thompson et al. in view of Kaneyasu et al. disclose the construction of an apparatus as described above.

However, they fail to disclose a waste heat utilizing unit for utilizing waste heat produced by the operation of the engine generator apparatus, wherein the engine is started in response to a heat request generated by the waste heat utilizing unit.

Gilliusson disclose the construction of a co-generation system having a waste heat utilizing unit (heating system - Figure 6) for utilizing waste heat produced by the operation of the

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engine generator apparatus, wherein the engine is started in response to a heat request (system turn-on) generated by the waste heat utilizing unit for the purpose of providing heat for a heating system.

It would have been obvious to one skilled in the art at the time the invention was made to use the co-generation system disclosed by Gilliusson on the an engine generator apparatus disclosed by Thompson et al. in view of Kaneyasu et al. for the purpose of providing heat for a heating system.

5. With regards to claim 3, Gilliusson disclose a waste heat utilizing unit comprising:

- a hot-water tank for storing a first hot water heated with the waste heat released from the engine generator apparatus;

- a first heat exchanger (12) installed in the hot-water tank for generating the first hot water;

- a second heat exchanger (heating system) positioned above the first heat exchanger in the hot-water tank for heating the first hot water to a second hot water hotter than the first hot water using the heat of the first hot water;

- a temperature sensor provided in proximity between the upper end of the first heat exchanger and the lower end of the second heat exchanger; and

- a controller (96, 98 and 100) arranged responsive to an output of the temperature sensor for generating and supplying the heat request to the engine generator apparatus as shown in Figures 1-6.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.

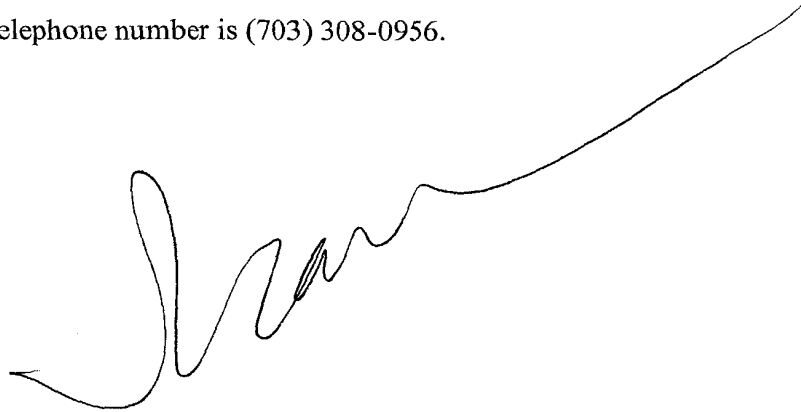
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Pedro J. Cuevas
December 13, 2002

A handwritten signature in black ink, appearing to read 'Tran Nguyen', with a long, sweeping horizontal line extending to the right.

TRAN NGUYEN
PRIMARY EXAMINER